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TAKEUCHI JUNICHI**(54) ELECTROSTATIC CHUCK MEMBER AND PRODUCTION THEREOF****(57)Abstract:**

PROBLEM TO BE SOLVED: To obtain an electrostatic chuck member having high volume resistivity with low fluctuation in which the quality is stabilized by providing an undercoat on a metal substrate through metallic spraying and then providing a ceramic spray coating containing a specified compound thereon.

SOLUTION: An undercoat is provided on a metal substrate through metallic spraying and a coating of $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic containing a $\text{TiO}_2\text{n-}$ ($\text{n}=1-9$) type compound is provided thereon by spraying. The metallic spray coating is $30-150\mu\text{m}$ thick and the $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating containing a $\text{TiO}_2\text{n-1}$ ($\text{n}=1-9$) type compound is $50-500\mu\text{m}$. The $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating containing a $\text{TiO}_2\text{n-1}$ ($\text{n}=1-9$) type compound has porosity of 0.4-3.0% and surface roughness R_a of $0.1-2.0\mu\text{m}$. The $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ based ceramic spray coating has a hole sealing layer on the surface and the volume resistivity thereof is in the range of $1\times 10^{-9}-1\times 10^{11}\Omega\cdot\text{cm}$.